

09/888,840

13780-2/226A/CO93.US.CP2

REMARKS**AMENDMENTS TO THE SPECIFICATION**

The specification has been amended in the interest of clarity and to correct typographical and grammatical errors. These amendments do not add new matter as detailed below. Entry of these amendments is respectfully requested.

Specification Amendments Beginning on Page 4, Line 8, and Ending on Page 6, Line 14.

The phrase "compounds of the structure" has been removed and replaced with "compounds of Formula I" for clarity. This sentence now clearly refers to the labeled Formula I below.

The phrase "or a pharmaceutically-acceptable salt, optical isomer or prodrug thereof," has been moved from the end of the definitions for the compounds of Formula I to the beginning of the definitions for clarity. This phrase has also been amended to correct a grammatical error. The phrase now refers to the plural form of the noun, stating "or pharmaceutically-acceptable salts, optical isomers or prodrugs thereof."

The definition for R^1 - R^5 has been amended to clarify the definition for the group of Formula II. The proviso that one of R^1 or R^3 must be selected from a group of Formula II has been placed below this formula in the claim.

The definition of R^{10} and R^{11} for the compounds of Formula I has been amended for clarity. In particular, the expressions "may be joined" and "said ring being optionally substituted" have been amended and the terms "unsubstituted" and "substituted" have been added to clarify that the heterocycle ring is unsubstituted or substituted. The definition of R^{10} and R^{11} now states "... R^{10} and R^{11} are taken together with N to form a three to seven membered unsubstituted heterocyclyl ring, or a three to seven membered substituted heterocyclyl ring, substituted with one or more than one substituent R^{13} ,"

09/888,840

13780-2/226A/CO93.US.CP2

The definition of A has been amended to clarify that the aryl and heterocyclyl groups can be either unsubstituted or substituted. The phrase "hydrogen" has accordingly been deleted from the list of substituents for R¹².

These amendments are made for clarity and/or to correct typographical errors and do not add new matter.

Specification Amendments Beginning on Page 6, Line 18, and Ending on Page 8, Line 16.

The phrase "compounds of the structure" on page 6, line 18 has been removed and replaced with "compounds of Formula III" for clarity. This sentence now clearly refers to the labeled Formula III below.

The phrase "D, B, Y, and Z are as defined above" on page 7, line 5 has been amended to recite "D, B, Y, and Z are as defined above for Formula I," to clarify that this phrase refers to Formula I.

The R¹² definitions on pages 7 and 8 for Formulas III and IV, respectively, have been amended to delete the hydrogen substituent for consistency with the amendments to the R¹² definition for Formula I, as described above.

The R¹⁰ and R¹¹ definitions on pages 7 and 8 have been amended as described above for the amendments to the definitions for Formula I.

The phrase "compounds of the structure" on page 7, line 18 has been removed and replaced with "compounds of Formula III" for clarity. This sentence now clearly refers to the labeled Formula IV below.

These amendments are made for clarity and/or to correct typographical errors and do not add new matter.

Specification Amendments Beginning on Page 28, Line 10, and Ending on Page 31, Line 10.

09/888,840

13780-2/226A/CO93.US.CP2

The specification, page 28, lines 10-14, has been amended slightly in the interest of clarity. In particular, the term "ring" has been added to line 10, to refer to the oxazole ring shown in Scheme 1. The sentence "In Scheme 1, and likewise in Schemes 2 and 4, the substituent X is a leaving group" has been added. The new sentence describes Schemes 1, 2, and 4 which all contain aryl methyl ketone 1. The terms (R_{1-2} , and R_{4-5}) have been added to describe the substitution as seen on aryl methyl ketone 1 in Scheme 1 (amended as described below). The number 2 has been added after the term "Biarylsulfide," to refer to the biarylsulfide shown in Scheme 1. The term "oxazole" has been added to line 14 in reference to compound 4, shown in Scheme 1, as an oxazole compound. The above-described amendments merely clarify the invention as described in the specification and shown in Schemes 1, 2, and 4 and no new matter is added by these amendments.

The description of Schemes 1-6, on pages 28-31 of the specification has also been amended to correct obvious typographical and/or grammatical errors. In particular, the plural form for referencing a compound structure has been changed to the singular form, when a single compound structure is described. The above amendments merely correct typographical and/or grammatical errors and clarify the invention as described in the specification and shown in Schemes 1-6.

Schemes 1-6 have been amended to correct obvious typographical errors in the interest of clarity. Specifically, the R_{1-4} group in these schemes is now represented by two groups, R^{1-2} , and R^{4-5} , and the Ar group lettering has been changed to A. The R group numbering and A group lettering is now consistent with the numbering and lettering shown in Formula I, on page 4, line 9 of the Specification, and in Claim 1, p. 121, line 4. Schemes 1-6 have also been amended such that the numbering of NR_9R_{10} is changed to $NR^{10}R^{11}$. This R group numbering is now consistent with the numbering shown in Formula II, on page 4, line 14 of the Specification, and in Claim 1, p. 121, line 10. Scheme 6 has further been amended such that Compound 22 is consistent with the remainder of Scheme 6. Specifically, the CF_3 group in Compound 22 has been changed to R^{1-2} and R^{4-5} groups. Compound 22, as amended,

09/888,840

13780-2/226A/CO93.US.CP2

is consistent with the preceding compound structures in Scheme 6, and is also consistent with Formula I, as shown on page 4, line 9 of the Specification, and in Claim 1, p. 121, line 4.

The above amendments to the Specification correct obvious errors. Accordingly, no new matter is added by these amendments. The Applicants respectfully request that the above-described amendments be entered into the application.

AMENDMENTS TO THE CLAIMS

This Response and Amendment amends Claims 1-9 and adds new Claims 10-27. These amendments and new claims do not add new matter as detailed below. Entry of the amendments and new claims is respectfully requested.

Claim 1.

Claim 1 has been amended such that the phrase "A compound of the structure" has been removed and replaced with "A compound of formula I," and the formula below has been labeled "I" for clarity. This preamble of Claim 1 now clearly refers to the labeled formula I below.

The phrase "or a pharmaceutically-acceptable salt or prodrug thereof," has been moved from the end of the definition for the compounds of formula I to the beginning of the definition for clarity. The phrase "or optical isomer" has been removed from Claim 1 for clarity. Formula I, as written, and the subsequent definitions, represents all of the optical isomers. Thus, the phrase "or optical isomer" has been removed as it is clearly redundant.

The definition for R^1 - R^5 has been amended to clarify the definition for the group of formula II, and formula II has been labeled accordingly. The proviso that "one or more than one of R^1 or R^3 is a group of formula II . . ." is now appropriately below formula II, as defined above.

The definition for R^{10} and R^{11} in Claim 1 has been amended for clarity. In particular, the term "or" has been added to the end of the definition for R^{10} and R^{11} . In

09/888,840

13780-2/226A/CO93.US.CP2

addition, the expressions "wherein R¹⁰ and R¹¹ may be joined . . ." and "said ring being optionally substituted" have been amended and the terms "unsubstituted" and "substituted" have been added to clarify that the heterocycle is unsubstituted or substituted. The definition of R¹⁰ and R¹¹ now states "R¹⁰ and R¹¹ are taken together with N to form a three to seven membered unsubstituted heterocyclyl ring, or a three to seven membered substituted heterocyclyl ring, substituted with one or more than one substituent R¹³,"

The definition of A in Claim 1 has been amended to clarify that the aryl and heterocyclyl groups can be either unsubstituted or substituted. The phrase "hydrogen" has accordingly been deleted from the list of substituents for R¹².

Claim 2.

Claim 2 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 1 wherein R³ is" to "A compound according to claim 1 wherein R³ is the group of formula II." The phrase is amended to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to the preceding independent claim. The formula in Claim 2 has appropriately been labeled "II." In addition, the definitions for D, B, Y, Z, R¹⁰ and R¹¹ in Claim 2 have been amended to clarify that these substituents are defined as in claim 1. The additional Claim 2 definitions have been deleted and are defined as in Claim 1.

Claim 3.

Claim 2 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 1 of the structure" to "A compound according to claim 1 of formula III." The phrase is amended to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to the preceding independent claim. The formula in Claim 3 has appropriately been labeled "III." In addition, the definitions for R¹, R², R⁴, R⁵, R¹⁰, R¹¹, R¹², D, B, Y, Z, and n in Claim 3 have been deleted and are defined as in Claim 1.

Claim 4.

09/888,840

13780-2/226A/CO93.US.CP2

Claim 4 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 3 . . ." to "A compound according to claim 3 . . ." The phrase is amended to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to the preceding claims, upon which Claim 4 depends. The definition for R¹⁰ and R¹¹ in Claim 4 has been amended for clarity as described in the amendment to Claim 1 above. The phrase "wherein R¹⁰, R¹¹, R¹² and R¹³ are unsubstituted or substituted with at least one electron donating or electron withdrawing group" has been added to clarify that these groups, (*i.e.*, the substituents redefined in Claim 4), can be unsubstituted or substituted. Support for this amendment is found in Claim 1 as originally filed.

Claim 5.

Claim 5 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 1 of the structure" to "A compound according to claim 1 of formula IV." The phrase is amended to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to the preceding claims, upon which Claim 5 depends. The formula in Claim 5 has appropriately been labeled "IV." The definitions for R¹⁰ and R¹¹ in Claim 5 have been amended and are defined as in Claim 1. The phrase "wherein R¹² is unsubstituted or substituted with at least one electron donating group or electron withdrawing group" has been added to the R¹² definition, which is redefined in Claim 5. Accordingly, the phrase "wherein R¹, R², R⁴, R⁵, R¹⁰, R¹², and R¹³, are unsubstituted or substituted . . ." has been deleted from Claim 5. Support for this amendment is in Claim 5, as originally filed. The phrase "hydrogen" has been deleted from the definition of R¹², as is consistent with the amendments to Claim 1.

Claim 6.

Claim 6 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 5 . . ." to "A compound according to claim 5 . . ." The phrase is amended to clarify that the claim includes "pharmaceutically acceptable salts or

09/888,840

13780-2/226A/CO93.US.CP2

prodrugs" according to the preceding claims, upon which Claim 6 depends. The definition for R¹⁰ and R¹¹ in Claim 6 has been amended for clarity as described in the amendment to Claim 1. The definition for R¹² has been deleted from Claim 6 and is now inherently defined as in Claim 5, upon which Claim 6 depends.

Claim 7.

Claim 7 has been amended to recite a clear dependent claim format by changing the phrase "The compound of claim 1 . . ." to "A compound according to claim 1 . . ." to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to preceding Claim 1, upon which Claim 7 depends.

Claim 8.

Claim 8 has been amended to recite clear dependent claim format as described in the amendment to Claim 7 above. Claim 8 has also been amended such that the phrase "in a pharmaceutically acceptable carrier" is now correctly recited as "and a pharmaceutically acceptable carrier."

Claim 9.

Claim 9 has been amended to recite a clear dependent claim format by deleting the phrase "of" and adding the phrase "according to" to clarify that the claim includes "pharmaceutically acceptable salts or prodrugs" according to preceding claim 1, upon which Claim 9 depends.

Claim 10.

Support for Claim 10 is found in the specification on page 11, lines 3-7: "The term "aryl" . . . refers to a mono. . . cyclic carbocyclic ring system having one or two aromatic rings. . . optionally substituted" Further support for Claim 10 is found in the specification on page 6, lines 6-12, which states "A is an aryl or heterocyclyl group, having at least one substituent R¹², . . ." and on page 14, lines 3-6, which states that

09/888,840

13780-2/226A/CO93.US.CP2

[h]eterocyclics also include compounds of the formula (shown in the specification), where X* and Z* are independently selected from . . . -CH₂-. . . -NH- and -O-, with the proviso that at least one of X* and Z* is not -CH₂, and Y* is selected from . . . and - (C(R'')₂)_v, where R'' is hydrogen or alkyl of 1 to 4 carbons, and v is 1-3.

Claim 11.

Support for Claim 11 is found in the specification on page 11, lines 3-7.

Claim 12.

Support for Claim 12 is found in the specification on page 6, line 19. Further support for Claim 13 is found in Examples 1-75 on pages 31-96 of the specification

Claim 13.

Support for Claim 13 is found in the specification on page 4, lines 16-17 through page 5, lines 1-2 and in Claim 1, as originally filed on page 121, lines 11-14 of the specification. Further support for Claim 13 is found on pages 28-31 of the specification (e.g., Schemes 1-6) and Examples 1-96 on pages 31-113 of the specification.

Claim 14.

Support for Claim 14 is shown in Schemes 1-6 on pages 28-31 of the specification and Examples 1-96 on pages 31-113 of the specification.

Claim 15.

Support for Claim 15 is found in the specification on page 4, lines 16-17 through page 5, lines 1-2 and in Claim 1, as originally filed on page 121, lines 11-14 of the specification. Further support for Claim 15 is shown in Schemes 1-3, on pages 28-29 of the specification and in Examples 1-13, on pages 31-44 of the specification.

Claim 16.

09/888,840

13780-2/226A/CO93.US.CP2

Support for Claim 16 is found in the specification on page 4, lines 16-17 through page 5, lines 1-2 and in Claim 1, as originally filed on page 121, lines 11-14. Further support for Claim 16 is shown in Examples 13-96 on pages 44-113 of the specification.

Claim 17.

Support for Claim 17 is found in the specification on page 4, lines 16-17 through page 5, lines 1-2; page 6, lines 15-17; and in Claim 1, as originally filed on page 121, lines 11-14 of the specification. Further support for Claim 17 is found on pages 28-31 of the specification (e.g., Schemes 1-6) and Examples 1-96 on pages 31-113 of the specification.

Claim 18.

Support for Claim 18 is found in the specification on page 4, lines 11-12 and in Claim 1, as originally filed on page 121, lines 6-7 of the specification. Further support for Claim 18 is found in Examples 1-96 on pages 31-113 of the specification.

Claim 19.

Support for Claim 19 is found in the specification on page 4, lines 11-12 and page 4, lines 16-17 through page 5, lines 1-2, and in Claim 1, as originally filed on page 121, lines 6-7 and 11-14 of the specification. Further support for Claim 19 is found on pages 28-31 of the specification (e.g., Schemes 1-6) and Examples 1-96 on pages 31-113 of the specification.

Claim 20.

Support for Claim 20 is found in the specification on page 4, lines 11-12 and in Claim 1, as originally filed on page 121, lines 6-7 of the specification. Further support for Claim 20 is found on page 13, lines 2-3 of the specification; pages 28-31 of the specification (e.g., Schemes 1-6); and Examples 1-96 on pages 31-113 of the specification.

Claim 21.

09/888,840

13780-2/226A/CO93.US.CP2

Support for Claim 21 is found in the specification on page 5, lines 3-4 and in Claim 1, as originally filed on page 121, lines 15-16 of the specification. Further support for Claim 2 is found in Examples 1-96 on pages 31-113 of the specification.

Claim 22.

Support for Claim 22 is found in the specification on page 4, lines 11-12 and in Claim 1, as originally filed on page 121, lines 6-7 of the specification. Further support for Claim 21 is found in Examples 1-96 on pages 31-113 of the specification.

Claim 23.

Support for Claim 23 is found in the specification on page 4, lines 11-12; and page 13, lines 1-3; and in Claim 1, as originally filed on page 121, lines 6-7 of the specification. Further support for Claim 23 is found in Examples 1-10 on pages 31-41 of the specification.

Claim 24.

Support for Claim 23 is found in the specification on page 4, lines 11-12; and page 13, lines 1-3; and in Claim 1, as originally filed on page 121, lines 6-7 of the specification. Further support for Claim 24 is found in Examples 11-12 on pages 42-44 of the specification.

Claim 25.

Support for Claim 25 is found in the specification on pages 114, line 2 through page 116, line 8, in particular on page 115, lines 3-4.

Claim 26.

Support for Claim 26 is found in the specification on page 4, lines 1-3.

Claim 27.

Support for Claim 27 is found in the specification on page 4, lines 3-6.